

Assignment 8

Textbook Assignment: "Oxygen Support Equipment"; and "Canopy Systems."
Pages 5-16 through 6-25."

Learning Objective;
*Identify components and
operating procedures for
gaseous oxygen servicing
trailers.*

- 8-1. What maximum number of manifold control valves are located on the No-2 oxygen trailer?
- 1.
 - 5
 - 6
 - 8
- 8-2. The No-2 oxygen trailer has two pressure regulators to ensure uninterrupted operation should one fail.
- True
 - False
- 8-3. The recharge valve on the No-2 oxygen trailer is provided for recharging the trailer cylinders directly through what device(s)?
- The lower manifold
 - The upper manifold
 - One of the two pressure regulators
 - The servicing hose and line valve
- 8-4. Where are the four shutoff valves located on the No-2 oxygen trailer?
- On the upper manifold
 - On the lower manifold
 - One on the inlet and outlet side of each pressure regulator
 - On the drier assembly
- 8-5. The lower manifold is connected to the drier assembly by what hose or line?
- Flexible hose
 - Steel line
 - Aluminum line
 - Copper line
- 8-6. The oxygen flows through the top of the dryer, passes down through the drying agent, and out through the servicing hose.
- True
 - False
- 8-7. Because gaseous oxygen cylinders must never be completely drained, residual pressure in O₂ cylinders should never be allowed to fall below what minimum pressure?
- 10 psi
 - 50 psi
 - 90 psi
 - 100 psi
- 8-8. Prior to removal or installation of oxygen cylinders on the No-2 oxygen trailer, cylinder safety caps will be installed.
- True
 - False
- 8-9. After 12 cylinders of oxygen have been used, the drying agent should be subjected to what action?
- Inspection
 - Changing
 - Drying
 - Destruction
- 8-10. What is the color of the drying agent in the dryer?
- Blue
 - White
 - Red
 - Green

- 8-11. When moisture is present in the oxygen system, the color of the indicating agent will change to what color?
1. White
 2. Black
 3. Green
 4. Pink
- 8-12. The indicating agent is well mixed with the drying agent.
1. True
 2. False
- 8-13. How should the caps on the dryer be tightened?
1. By hand only
 2. To specified torque
 3. With a strap wrench
 4. With a pipe wrench
- 8-14. If leakage occurs around the dryer caps, what is the most probable cause of the leak?
1. A cross-threaded cap
 2. A crack in the dryer
 3. A bad O-ring
 4. A weak marmon clamp
- 8-15. What information do the daily, preoperational, or periodic maintenance requirement cards for the No-2 oxygen trailer provide?
1. Instructions for repair
 2. Instructions for adjustments
 3. A means of rectifying defective conditions
 4. The minimum requirements necessary to maintain the equipment and ensure that no item is overlooked
- 8-16. The daily requirements should be accomplished prior to the first use of the equipment for that day.
1. True
 2. False
- 8-17. A temperature correction chart to determine the pressure to which aircraft cylinders should be filled may be found in what location(s)?
1. In the oxygen trailer daily requirement cards
 2. In the oxygen trailer maintenance requirement cards
 3. On the aircraft oxygen cylinders
 4. In the applicable MIM or on the side of the No-2 oxygen servicing trailer
- 8-18. Oxygen under high pressure will increase in temperature during the servicing procedure.
1. True
 2. False
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- Learning Objective:
Identify the components, operation, maintenance requirements, emergency survival equipment, and cartridge-actuated devices (CAD) for the ESCAPAC 1E-1 ejection seat.
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- 8-19. The ESCAPAC 1E-1 seat provides escape capabilities within what ejection parameters?
1. Ground level and 0-knots
 2. All altitudes and airspeeds
 3. Both 1 and 2 above
 4. A minimum altitude of 50 feet and 100 knots
- 8-20. The rocket catapult is fired by what initiator?
1. M99
 2. 0.5-second delay
 3. Mk 86
 4. 0.3-second delay
- 8-21. Which of the following components prevent the forward seat from firing before the rear seat?
1. An in-line restrictor
 2. Mk 11 Mod 0 initiator
 3. Selector valve
 4. Diverter manifold

- 8-22. Which of the following actions is caused by rotation of the bell crank attached to the harness release actuator?
1. Survival kit and shoulder harness pins are released
 2. Retaining pin is retracted from the firing disconnect
 3. Seat/man separator racket is ignited
 4. Each of the above
- 8-23. Upon seat/man separation, the main parachute will deploy after a delay of what minimum number of seconds?
1. 0.10 second
 2. 0.25 second
 3. 0.55 second
 4. 1.25 seconds
- 8-24. An aneroid prevents deployment of the main parachute if ejection is above what minimum altitude?
1. 12,500 ft
 2. 13,000 ft
 3. 14,000 ±500 ft
 4. 15,500 ±500 ft
- 8-25. Which of the following components is used to prevent accidental seat ejection?
1. Initiator safety pin
 2. Safety disconnect
 3. Head knocker
 4. Face curtain safety pin
- 8-26. Which of the following components is NOT located under the seat bucket?
1. Gyro spin-up cartridge
 2. Vernier rocket
 3. Pitch stabilization control
 4. Yaw thruster
- 8-27. What prevents incorrect installation of the yaw thruster?
1. Tapered bolts
 2. Boss and fixed stop
 3. Flat-sided clevis pin
 4. Mechanical guide groove
- 8-28. The yaw vane provides enough drag to yaw the seat what minimum number of degrees?
1. 10
 2. 20
 3. 30
 4. 40)
- 8-29. The delay cartridge in the harness release actuator is fired by what means?
1. A spring action
 2. A trip rod
 3. Hydraulic pressure
 4. Gas pressure
- 8-30. After ejection, the aircrewman is separated from the seat by what action?
1. A rocket
 2. Pushing down and back on the seat
 3. Air blast
 4. A drague chute
- 8-31. The seat height actuator is driven by what motor or pressure?
1. A 2B-volt electric motor
 2. Hydraulic pressure
 3. A 115/120-volt electric motor
 4. Pneumatic pressure
- 8-32. How many M99 initiators are installed in the four seat positions of the S-3 aircraft?
1. 4
 2. 6
 3. 8
 4. 12
- 8-33. Which of the foallowing component is mounted on the ejection seat?
1. Guide rails
 2. Seat height control
 3. M99 initiator
 4. Firing rods
- 8-34. How many M53 initiators are installed in the ejection seat plumbing?
1. 9
 2. 11
 3. 13
 4. 15

- 8-35. How many 0.3-second delay initiators are installed in the s-3 seat ejection system?
1. 5
 2. 7
 3. 3
 4. 10
- 8-36. How many check valves are installed in the ejection seat plumbing?
1. 17
 2. 20
 3. 29
 4. 32
- 8-37. Group ejection is controlled by what individual(s)?
1. Pilot only
 2. Copilot only
 3. Pilot/copilot
 4. None of the above
- 8-38. Which of the following components routes gas pressure to the ejection sequencing system?
1. Selector valve
 2. Delay initiator
 3. Sequencing valve
 4. Gas manifold
- 8-39. The altitude sensor switch provides which of the following functions?
1. On ejection, it prevents seat separation above 15,000 feet
 2. Monitors aircraft altitude
 3. Locks the parachute spreader gun below 14,500 feet
 4. Monitors ,cabin pressure
- 8-40. Which of the following signals warn the TACCO and SENSO that group ejection is going to take place?
1. Bell
 2. Buzzer
 3. Eject warning flag
 4. Flashing indicator lights
- 8-41. When the aircraft is on the ground, crew members conduct an emergency exit by what means?
1. Manually jettisoning the canopy
 2. A window/hatch severance system
 3. Ejecting through the canopy
 4. Manually cutting through the canopy
- 8-42. The emergency egress system can be initiated from any one of how many positions?
1. Five
 2. Two
 3. Three
 4. Four
- 8-43. Which of the following statements regarding the emergency egress system is NOT true?
1. It is more reliable than a hot gas system
 2. It is slower than a hot gas system
 3. It is safer than other like systems
 4. It is an inert system when properly safetied
- 8-44. The window/hatch jettison system is actuated by which of the following methods/components?
1. Electrical switch
 2. Hydraulic pressure
 3. Initiator gas pressure
 4. Pneumatic bypass valve
- 8-45. The wing-to-fuselage fillet is cut during emergency hatch jettison by which of the following components?
1. Initiator fired cutter
 2. Shaped charge
 3. Explosive bolts
 4. Pneumatic severance cable
- 8-46. Which of the following components in the S-3 egress system replaces pneumatic lines in older egress systems?
1. SMDC segments
 2. Electronic relays
 3. LED arrays
 4. CPUs

- 8-47. Before starting the removal of the ejection seat, which of the following checks should be made?
1. Seat and canopy safety pins are installed
 2. Head knocker in the down position
 3. Pilot and copilot eject mode selector handles in self-eject position
 4. Each of the above
- 8-48. When adjusting the height of the ejection seat, the actuator switch should not be held in the up or down position for more than how many seconds?
1. 10
 2. 15
 3. 20
 4. 25
- 8-49. Which of the following tools is used to disconnect the inertia reel base?
1. Box-end wrench
 2. Open-end wrench
 3. Spanner wrench
 4. Key and flag assembly
- 8-50. When removing the seat, what must be done to prevent injury to maintenance personnel as the seat reaches the top of the guide rails?
1. Disconnect rocket firing lanyard
 2. Safety the M95 initiators
 3. Prevent the yaw vane from deploying
 4. Install the seat balance beam
- 8-51. When performing the face curtain pull test, how many pounds of force is required to unseat the plungers from their retainers?
1. 20 \pm 10 pounds
 2. 30 \pm 10 pounds
 3. 40 \pm 10 pounds
 4. 50 \pm 10 pounds
- 8-52. During ejection seat testing, a force of how many pounds is required to unseat the secondary ejection control from the stowed detent position?
1. 12 \pm 5 pounds
 2. 20 \pm 5 pounds
 3. 25 \pm 2 pounds
 4. 30 \pm 2 pounds
- 8-53. When the secondary ejection control is pulled, it must extend at least how many inches from the stowed position?
1. 0.50 in
 2. 0.75 in
 3. 1.00 in
 4. 1.25 in
- 8-54. If the inertia reel fails the simulated g test, it must be replaced. What is the simulated g force required for this test?
1. 1 g
 2. 2 g
 3. 3 g
 4. 4 g
- 8-55. With the harness release piston in the fully extended position, what should the measurement be between the bottom of the actuator housing and the clevis shoulder?
1. 5.06 \pm 0.03 in
 2. 5.35 \pm 0.05 in
 3. 6.00 \pm 0.50 in
 4. 6.09 \pm 0.07 in
- 8-56. To release the piston from its fired position, what tool(s) is/are used to spread the locking dogs?
1. Spanner wrench
 2. Two 1/4-inch drive extensions
 3. Drift punch
 4. Two 1/8-inch rods
- 8-57. What is the maximum force required to lack the piston in the harness release actuator?
1. 10 pounds
 2. 20 pounds
 3. 30 pounds
 4. 40 pounds

- 8-58. The lap belt and shoulder harness retaining pins should protrude through the seat structure a minimum of how many inches?
1. 0.06 in
 2. 0.19 in
 3. 0.25 in
 4. 0.47 in
- 8-59. Which of the following items is NOT contained in the bottom half of the RSSK-8A-1 survival kit?
1. Life raft
 2. Radio transmitter
 3. Emergency oxygen bottle
 4. Survival kit bag
- 8-60. The seat survival kit oxygen bottle may be actuated by what process?
1. Automatically only
 2. Manually only
 3. Automatically or manually
 4. Pneumatically or electrically
- 8-61. Information for marking initiators is found in which of the following manuals?
1. NAVAIR 01-1A-509
 2. NAVAIR 01-1A-17
 3. NAVAIR 11-85-1
 4. NAVAIR 11-100-1
- 8-62. Egress system pneumatic gas lines have been replaced in later aircraft by which of the following components?
1. Detonating cords
 2. Electrical circuits
 3. Booster initiators
 4. Gallium arsenide connectors
- 8-63. Which of the following components fires the booster cartridge in the rocket catapult?
1. Firing control initiator
 2. Detonating card booster
 3. Ejection delay initiator
 4. Rocket catapult cartridge assembly
- 8-64. Information on disposing of damaged rocket catapults is found in which of the following manuals?
1. NAVAIR 01-1A-17
 2. NAVAIR 01-1A-509
 3. NAVAIR 11-85-1
 4. NAVAIR 11-100-1